

● PRINTER RUSH ●

(PTO ASSISTANCE)

Application : <u>10 611 457</u>	Examiner : <u>B Lee</u>	GAU : <u>2632</u>
From: <u>mg</u>	Location: <u>ADC</u> FMF FDC	Date: <u>01.03.06</u>
Tracking #: <u>10 611 457</u> <u>EPM</u>		Week Date: <u>09.19.05</u>

DOC CODE	DOC DATE	MISCELLANEOUS
<input type="checkbox"/> 1449		<input type="checkbox"/> Continuing Data
<input type="checkbox"/> IDS		<input type="checkbox"/> Foreign Priority
<input type="checkbox"/> CLM		<input type="checkbox"/> Document Legibility
<input type="checkbox"/> IIFW		<input type="checkbox"/> Fees
<input type="checkbox"/> SRFW		<input type="checkbox"/> Other
<input type="checkbox"/> DRW		
<input type="checkbox"/> OATH		
<input type="checkbox"/> 312		
<input checked="" type="checkbox"/> SPEC	<u>09.24.05</u>	

[RUSH] MESSAGE: _____

on page 1, line 2 of the SPEC 09.24.05 -

Please provide the missing U.S. Application Serial Number.

Thanks.

[XRUSH] RESPONSE: _____

Dae

INITIALS: ly

NOTE: This form will be included as part of the official USPTO record, with the Response document coded as XRUSH.
REV 10/04

EV 134752951 US

Date of Deposit: 7-1-03

hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 2313-1450.



Docket No. 14247US01

- 1 -

Brenda K. Johnson

Typed or printed name of person mailing paper or fee)

Signature of person mailing paper or fee)

ACOUSTIC WAVE ICE AND WATER DETECTOR

CROSS-REFERENCE TO RELATED APPLICATIONS

5

This application is related to U.S. patent application entitled "Torsional Acoustic Wave Sensor," Serial No. 106/1583, filed concurrently herewith and U.S. patent application entitled "Acoustic Wave Touch Detection Circuit and Method," Serial No. 10/454,003, filed June 4, 2003.

10

STATEMENT REGARDING FEDERALLY SPONSORED
RESEARCH OR DEVELOPMENT

N/A

15

FIELD OF INVENTION

20

The present invention relates to an acoustic wave sensor utilizing one or more acoustic waves trapped in an acoustic wave cavity for detecting the presence of one substance or more than one substance on the surface of the cavity. In one embodiment, the acoustic wave sensor forms an ice detector and in another embodiment, the sensor forms an ice and water detector although the acoustic wave sensor of the present invention can be used to sense the presence of other substances as well.

25

BACKGROUND OF THE INVENTION

Ice detectors are known that utilize acoustic waves propagating over a distance through a structure, such as the outer material of an airplane wing, wherein the acoustic waves propagate between a transmitter transducer and a receiver transducer. Propagating waves are